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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/804,768

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Chih-Ming Tsai

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08/28/2006

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EXAMINER

DANG, KHANH

ART UNIT

PAPER NUMBER

2111

DATE MAILED: 08/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/804,768 | TSAI, CHIH-MING | |
| | Examiner | Art Unit | |
| | Khanh Dang | 2111 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 12-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 12-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Application, previously assigned to and examined by Ex. Justin King, is now assigned to Ex. Khanh Dang, whose contact information is provided at the end of this Office Action.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-10, and 12-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Abramson (U.S. Patent No. 5,951,667).

Referring to claim 1: Abramson discloses a bus interface extender (figure 5, structure arbiter) with a plurality of second pins (figure 5, structure arbiter's connectors connecting to BM IDE controller, USB host controller, and ISA arbiter controller), and at least one third pin (figure 5, structure arbiter's connector connecting to the structure PCI arbiter), wherein the at least one third pin is electrically coupled to a corresponding one of the first pins of the bus arbitrator (figure 5, structure PCI arbiter's connector connecting to the structure arbiter), and each of the second pins can be electrically coupled to a corresponding second bus device (figure 5, structures BM IDE controller, USB host controller, and ISA arbiter controller), so the bus interface extender arbitrates each request signal sent by each second bus device through the second pins asking for

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use of a bus channel, according to a first grant signal, that allows the use of the bus channel and is produced after arbitrating by the bus arbitrator and received by the bus interface extender through the at least one third pin. Hence, the claim is anticipated by Abramson. Note that the newly introduced limitation further limiting the “bus” to “PCI bus” is fully addressed under section: “Response to Argument.”

Referring to claim 2: Abramson discloses a priority decision module (column 7, lines 20-29 and 38-44, figure 6) for determining a priority sequence in using the bus channel for each second bus device according to a priority decision rule, a grant decision module (column 7, lines 20-29 and 38-44) for deciding one of the second bus devices with the highest priority according to the priority decision rule and confirming whether the second bus device with the highest priority is in request status (column 7, lines 50-54), and a bus signal processing module (column 5, lines 50-53) for correspondingly sending a second grant signal to a proper one of the second bus device according to the first grant signal and a decision result decided by the grant decision module to form signal transmission between the proper one of the second bus device and a system bus. Note that the newly introduced limitation further limiting the “bus” to “PCI bus” is fully addressed under section: “Response to Argument.”

Referring to claim 3: Abramson discloses that the arbiter uses a priority state machine (figure 6) and Abramson discloses that the expansion bus arbiter moves between the states (column 7, lines 45-48). Thus, Abramson discloses using a fixed-priority arbitration mode.

Referring to claim 4: Abramson's state machine is round-robin.

Referring to claim 5: Abramson discloses the PCI protocol.

Referring to claim 6: Abramson discloses that at least one of the second bus devices sends a request signal of asking use of the bus channel to the bus arbitrator through the at least one third pin of the bus interface extender, and the request signal asking for use of the bus channel is arbitrated by the bus arbitrator (column 7, lines 20-30).

Referring to claims 7-10, 12-20, see discussion above, since the subject matter presented in claims 7-10, 12-20 has already been addressed.

Response to Arguments

Applicants' arguments filed 6/29/2006 have been fully considered but they are not persuasive.

At the outset, Applicants are reminded that claims subject to examination will be given their broadest reasonable interpretation consistent with the specification. *In re Morris*, 127 F.3d 1048, 1054-55 (Fed. Cir. 1997). As a matter of fact, the "examiner has the duty of police claim language by giving it the broadest reasonable interpretation." *Springs Window Fashions LP v. Novo Industries, L.P.*, 65 USPQ2d 1862, 1830, (Fed. Cir. 2003). Applicants are also reminded that claimed subject matter not the specification, is the measure of the invention. Disclosure contained in the specification cannot be read into the claims for the purpose of avoiding the prior art. *In re Sporck*, 55 CCPA 743, 386 F.2d, 155 USPQ 687 (1986).

With this in mind, the discussion will focus on how the terms and relationships thereof in the claims are met by the references. Response to any limitations that are not in the claims or any arguments that are irrelevant and/or do not relate to any specific claim language will not be warranted.

The 102 Rejection:

With regard to claims 1, 7, 10, 14, and 18, Applicants argue that “[i]ndependent Claim 7, as amended, recites, among other things, that at least one second PCI bus device is electrically coupled to the bus interface extender. Each of independent Claims 1, 10, 14 and 18 includes a similar feature thereto. Applicant respectfully submits that Abramson does not disclose the above-indicated feature of the claimed invention.”

At the outset, it is noted that the limitation “at least one second PCI Bus” cannot be found in claims 1 and 18.

In any event, contrary to Applicants’ argument, Abramson clearly discloses that “an expansion bus bridge arbiter 630 in the expansion bus bridge 610 accepts PCI bus access requests from the a USB host controller 640, an ISA bus controller 670, and a Bus Master IDE controller 680.” Abramson further discloses that “[w]hen the expansion bus bridge arbiter 630 obtains control of the PCI bus, the expansion bus bridge arbiter 630 allows one of the three controllers to access the PCI bus to perform a PCI bus transaction. The particular controller that obtains access to the PCI bus depends on the current state of the expansion bus arbiter. When more than one of the three controllers

in the expansion bus bridge (USB host controller 640, ISA bus controller 670, and Bus Master IDE controller 680) wish to have access to the PCI bus, then expansion bus arbiter 630 must decide which controller will obtain access to the PCI bus." Thus, it is clear that devices 640, 680, and 670 are PCI devices. In another word, Abramson discloses at least one second PCI bus device is electrically coupled to the bus bridge arbiter 630 or the so-called "bus interface extender."

With regard to claims 2-6, 8-9, 12-13, 15-17 and 19-20, Applicants argue that "claims 2-6, 8-9, 12-13, 15-17 and 19-20 depend from base Claim 1, 7, 10, 14 or 18, and further define additional technical features of the present invention. In view of the patentability of their base claims, and in further view of their additional technical features, Applicant respectfully submits that the dependent claims are patentable over the prior art of record."

In response to Applicants' argument, see discussion regarding to independent claims 1, 10, 14, and 18.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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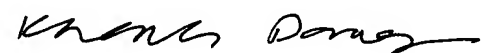
shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh Dang whose telephone number is 571-272-3626. The examiner can normally be reached on Monday-Friday from 9:AM to 5:PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart, can be reached on 571-272-3632. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**Khanh Dang
Primary Examiner**